

### REMARKS

Reconsideration of this application is respectfully requested in view of the following remarks.

Claims 2-20 are pending in this application. No claims are amended, added, or canceled by this Response. For the reasons stated below, Applicant respectfully submits that all claims pending in this application are in condition for allowance.

In the Office Action mailed July 1, 2010, claims 2 and 7-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 03/082480 to Matsunaga et al. ("Matsunaga") in view of U.S. Patent No. 4,488,665 to Cocks et al. ("Cocks"); and claims 3-6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsunaga and Cocks in view of EP 0930 641 to Kiguchi et al. ("Kiguchi"). To the extent that these rejections might still be applied to the claims currently pending in this application, they are traversed.

Applicant respectfully submits that the Examiner's rationale in support of the rejections under § 103 over Matsunaga and Cocks is seriously flawed. The Examiner has failed to present a *prima facie* showing of obviousness because, in part, (1) the references, alone or in combination, do not disclose, teach, or suggest the specifically claimed features; and (2) no rationale has been provided to explain why one of ordinary skill in the art would combine Matsunaga and Cocks to arrive *at the claimed invention*. That is, the Examiner does not explain why one would combine the references to arrive at a device having a plurality of lateral outlet openings distributed along tubular dispensing. The Examiner acknowledges that Matsunaga does not disclose this feature on page 4 of the Office Action, and further acknowledges that

Cocks discloses a plurality of individual applicators in a housing, but does not complete the analysis in explaining why the references would be combined to disclose *a dispensing tube including a wall with a plurality of lateral outlet openings*, as claimed. Neither reference discloses such a feature and there is no contention that it is otherwise known in the art.

It may be the case (although Applicant does not concede it so), as the Examiner suggests, that it would be obvious to combine the references to use a plurality of individual applicators (per Cocks) in an applicator device in the system of Matsunaga for the reason identified by the Examiner (dispensing of a larger quantity of fluid more quickly). However, that fact, if true, is neither here nor there. Neither of the references disclose, teach, or suggest a dispensing tube including a wall with a plurality of lateral outlet openings, and the Examiner has not provided sufficient rationale as to why these differences would have been obvious to one of skill in the art. "Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art." MPEP § 2141. The notion that one would be motivated to dispense a large quantity of fluid quickly does not prompt one to combine Matsunaga and Cocks to arrive at the specifically claimed invention.

Cocks clearly does not cure the acknowledged deficiencies of Matsunaga. Cocks discloses an applicator housing having a plurality of applicator nozzles. Cocks does not disclose, teach, or suggest, and the Examiner does not even claim that Cocks discloses, teaches, or suggests, a tube with a plurality of lateral outlet openings. As such, the Examiner cannot rely upon Cocks to cure the deficiencies of Matsunaga. Accordingly, claims 2 and 7-20 are patentable over Matsunaga, alone or in combination. Claims 3-6 are patentable over Matsunaga

and Cocks at least by virtue of their dependency from claim 2 and for the additional features recited therein. Kiguchi was cited by the Examiner for subject matter relating to substrate movement and heating. Kiguchi clearly does not disclose the above-mentioned deficiencies of Matsunaga and Cocks.

The claims are therefore patentable for at least the above reasons.

In addition, Matsunaga and Cocks are not analogous art. Matsunaga relates to a method of dispensing a liquid, in which the statement "dispensing a liquid as used comprehends both dispensing (the liquid as it is) and spraying (spraying the liquid), that is atomizing it and then dispensing it" (Matsunaga, p. 1, lines 15-19), whereas the present application does not refer to atomizing at all. Moreover, the device of Matsunaga is made in view of problems mentioned (Matsunaga, p. 7, lines 11-12), *e.g.*, the coating of the inner surface of an alkali dry battery (Matsunaga, p. 2, lines 16-17), which are completely different from the problems mentioned in the application (*cf.* application as published, p. 1 lines 18-29).

Cocks discloses an apparatus and a method for applying an adhesive in the form of small dots, thin dashed or solid lines, large dots, or broad dashed or solid lines to various products such as paper cartons, diaper, paper towels, bathroom tissues or other like products (Cocks, column 1, lines 12-15).

In contrast to these references, the present invention relates to an apparatus for applying in reproducible manner a second layer, which is homogenous, onto a first layer of a nanocrystalline material, *e.g.*, for a layer of a sufficient width for a photovoltaic element, which layer can be applied in a short period of time. Such an apparatus is to be used for the

manufacture of photovoltaic elements on industrial scale. (description as filed, page 1, line 24 through page 2, line 6).

As the fields of coating the inner surface of an alkali battery (Matsunaga), applying an adhesive to paper (Cocks) and the coating of a layer of a nanocrystalline material for a photovoltaic element are fields far remote from each other, there is no incentive at all for the skilled person to combine the teachings of Matsunaga and Cocks to arrive at the present invention due to their disparate respective technologies.

Matsunaga teaches a liquid dispensing apparatus which, with reference to Fig. 1, comprises two ports, each being connected to a syringe, said ports having an axial outlet opening ending into a vertical outlet channel, which is closed with a vertical needle 3. The liquid is to be dispensed from an opening in the valve seat 4. (Matsunaga, p. 12 line 25 - p. 13, line 1). In contrast, the tubular dispensing means according to the invention is provided with lateral outlet openings, from which the liquid is directly dispensed.

Cocks teaches a multiple outlet adhesive applicator apparatus which applies closely-spaced lines or dots of an adhesive which is not operated by compressed air (Cocks, column 2, lines 60-63). In this apparatus, a number of individual applicators or rows may be used (column 4, lines 6-7). Each individual applicator comprises a solenoid coil and a fluid dispensing module (column 4, lines 20-23).

In contrast, in the tubular dispensing means according to the invention, it is not required to use a number of individual applicators or rows, in order to provide a number of outlet

openings. Instead, only one applicator is used, which is provided with lateral outlet openings, from which the liquid is directly dispensed.


Even if Matsunaga or Cocks should be considered as documents of analogous art (which they are not), it would not have been obvious to one ordinary skilled in the art at the time the invention was made to incorporate the multiple-outlet adhesive applicator of Cocks into the liquid dispenser of Matsanaga for the apparatus as disclosed in the present application, as also discussed above.

In view of the foregoing all of the claims in this case are believed to be in condition for allowance. Should the Examiner have any questions or determine that any further action is desirable to place this application in even better condition for issue, the Examiner is encouraged to telephone applicants' undersigned representative at the number listed below.

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